

ABSTRACT

An atomic force microscope (AFM) capable of observing
the topography of a sample surface at high-speed with a high
5 resolution under the atmospheric pressure and a driving
method therefor is provided. The AFM comprises a light beam
source unit, a light beam scanner, a scanning probe unit (or
matrix), a light beam detection unit, a driving control unit
and a display unit. The driving method comprises the steps
10 of vibrating, responsive to a reference signal, a first
actuator provided on each of scanning probes; detecting a
deflection amount of a cantilever provided with a tip at its
free end; and transmitting a servo signal to a second
actuator based on the deflection amount of the cantilever.

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